

Date: Wednesday, 17/09/2008 2:41:39 PM
 User: Julie Lecocq

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: HIGH AFT X-TUBE 412
Job Number	: 42064		
Estimate Number	: 10559		
P.O. Number	:	Part Number	: D412664203
This Issue	: 17/09/2008	S.O. No.	:
Prsht Rev.	: NC	Drawing Number	: D412-664-243 REV D
First Issue	: 11	Project Number	: N/A
Previous Run	: 42063	Drawing Revision	: D
	Type : CROSSTUBES	Material	:
Written By	:	Due Date	: 30/09/2008
Checked & Approved By	: <u>JUD 08.9.17</u>	Qty:	1 Um: Each
Comment	: Est Rev:E 04.02.16 Reformat; Added D3189-1 K/DS Est Rev:F 06-03-29 Remove Comments on Pick List JLM Est Rev:G 06.12.08 per ECN 886 EC Est Rev:H 07-04-30 As per Rev D JLM Est Rev:I 08-06-12 add comment in seq. 21 DD verified by:EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
----------------	------------------------------	----------------------

1.0	DC	DOCUMENT CONTROL
-----	----	------------------



JUD 08.9.24



Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D412-664-203 CHG 006

2.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1

3.0	D412664203TRN	Crosstube Turning Detail
-----	---------------	--------------------------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

CROSSTUBE TURNING DETAIL

batch 1341998

DP 8-9-25

4.0	BENDING	BENDING MACHINE - SKIDTUBES
-----	---------	-----------------------------



Comment: BENDING MACHINE

Bend tube as per Dwg D412-664-243 using CNC bender program 412-af and Folio FT010

DP 8-9-25

5.0	QC15	DIMENSIONAL CHECK OF X-TUBES
-----	------	------------------------------



Comment: DIMENSIONAL CHECK OF X-TUBES

J 08092510

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 17/09/2008 2:41:39 PM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH AFT X-TUBE 412

Job Number: 42064

Part Number: D412664203

Job Number:



Seq. #: Machine Or Operation: Description :

6.0 CROSSTUBES

CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube as per Dwg D412-664-243 using drill Jig DT8550 & DT8551

2-Ream hole to finish size in tube as per Dwg D412-664-243 using drill Jig DT8550 & DT8551. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes.

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D412-664-243

ET
08-09-25

AWM
8-9-26

7.0 HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

AWM
8-9-26

8.0 QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

8 08/09/29 (20)

9.0 QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

8 08/09/29 (20)

10.0 OUTSIDE SERV.11

OUTSIDE SERVICE -CROSSTUBES



Comment: Sub-Contracting OUTSIDE SERVICES

Liquid Penetrant Inspection as per QSI 038Or

Issue P/O: 7301 LPI as per ASTM 1417

Level 2 Attach copy of NDT results to work order

C208110/02 (1)

11.0 PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Inspect for transit damage

Ensure copy of NDT results attached to work order.

P-8/10/2 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 17/09/2008 2:41:39 PM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH AFT X-TUBE 412

Job Number: 42064

Part Number: D412664203

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

QC5

INSPECT WORK TO CURRENT STEP



ml 08 10 02 (1)



Comment: Inspect for damage & ensure results are as per Dwg D412-664-203

13.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

ml 08 10 02 (1)

14.0

QC14

INSPECT SPRAY PAINT



08-10-03 (1)



Comment: Inspect Spray Paint

Wrap in plastic bag to protect from scratches

15.0

D3595063570

RUBBER CUSHION



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Rubber Cushion

Batch:

37971

ml 08 10 06

16.0

D2856600

Abrasion Strip



Comment: Qty.: 1.7640 f(s)/Unit Total : 1.7640 f(s)

Pick:

Qty Part number Description Batch

2 D2856-600(Cut to 10.090") Abrasion Strip

36398

ml 08 10 06

17.0

D28961

Support



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D2896-1 Support

33471

ml 08 10 06

18.0

D31891

Chafing Shield



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D3189-1

Chafing Sheild 39136

ml 08 10 06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 17/09/2008 2:41:39 PM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH AFT X-TUBE 412

Job Number: 42064

Part Number: D412664203

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

MS2192028

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part number Description Batch

4 MS21920-28 Clamp 108847

ml 08 10 06

20.0

MS2192030

clamp(per MIL-DTL-8783C)



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

clamp(per MIL-DTL-8783C)

batch: 106810

ml 08 10 06

21.0

CROSSTUBES

CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Assemble as per Dwg D412-664-203

1- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe

2-Install supports with magnobond as per QSI 015 Adhere for for 12 Hrs

A/R 6398 Magnobond Batch: 108966

Expiry Date: 10/2009

Time: 330pm

3-Install clamps as per Dwg D212-664-203 using installation jig DT9024 with 0.010 thick brass shims on both chafing shield (D3189-1). Torque clamps to 80-100 in lb.

ml 08 10 06 ①

ml 08 10 07 ①

22.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08-10-07 ①

23.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 17/09/2008 2:41:40 PM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH AFT X-TUBE 412

Job Number: 42064

Part Number: D412664203

Job Number:



Seq. #: Machine Or Operation: Description :

24.0 AN640A Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Bolt
Batch: M107971 x2 M108940 x2 SS 08/10/08 (X1)
last of old batch not in comp.

25.0 AN641A Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)
Bolt
Batch: M107013 SS 08/10/08 (X1)

26.0 AN960JD616 Washer



Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)
Washer
Batch: M108521 SS 08/10/08 (X1)

27.0 MS21042L6 Nut



Comment: Qty.: 6.0000 Each(s)/Unit Total : 6.0000 Each(s)
Nut
Batch: M108183 SS 08/10/08 (X1)

28.0 QC4 INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS
08/10/08 (X1)

29.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D412-664-203

*****Ensure tube is not packaged if curing time is less than 12 hrs, see step 27 for application time & date

Time & date of packaging: 7:35am 08/10/08

Location: 9
PPP Rev: 8/10/8 SS 510

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 17/09/2008 2:41:40 PM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HIGH AFT X-TUBE 412

Job Number: 42064

Part Number: D412664203

Job Number:



Seq. #:

Machine Or Operation:

Description :

30.0

QC21

FINAL INSPECTION/W/O RELEASE



08/10/09 *[Signature]*

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



U 28.10.08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

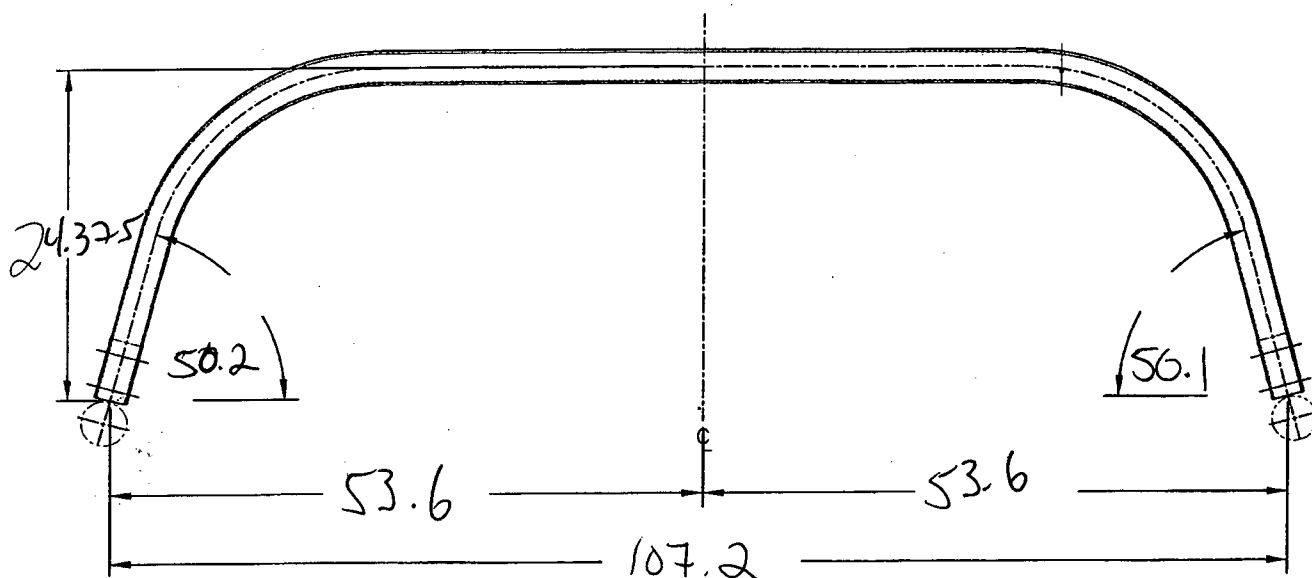
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order: 42024	
Description: Crosstube High Aft (412)	Part Number: D412-664-203	
Inspection Dwg: D412-664-243 Rev: D		Page 1 of 1

Required Dimension	Min	Max
Height	24.24	24.50
1/2 Span	53.59	53.85
Angle	49	52
Total Span	107.18	107.70



Comments

QC15 Inspection	<i>[Signature]</i>
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	07.05.08	Dimensions updated per Dwg rev. D	KJ/JLM <i>[Signature]</i>	<i>[Signature]</i>

DART**RELEASE**

07.04.24

DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED QP	APPROVED [Signature]	DRAWING NO. D412-664-243	REV. D SHEET 1 OF 3
DATE 07.03.09		TITLE CROSSTUBE ASSEMBLY (412 HI AFT) NTS	
A	01.10.17	NEW ISSUE	
B	05.02.04	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	
C	06.10.27	REMOVE D2856-600-1087, ADD D2732-058 & MAGNOBOND 6398 MS21920-32 WAS MS21920-30	
D	07.03.09	REMOVE D2732-058, CHANGE TO D3595-063-570	

Qty	Part Number	Description
X	D412-664-243	CROSSTUBE ASSEMBLY (412 HIGH AFT)
1	D6009-129	CROSSTUBE
2	D3595-063-570	RUBBER CUSHION
1	D2896-1	SUPPORT
2	D2856-600-1009	ABRASION STRIP
4	MS21920-28	CLAMP
2	MS21920-30	CLAMP (OR MS21920-32)
2	D3189-1	CHAFING SHIELD
A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

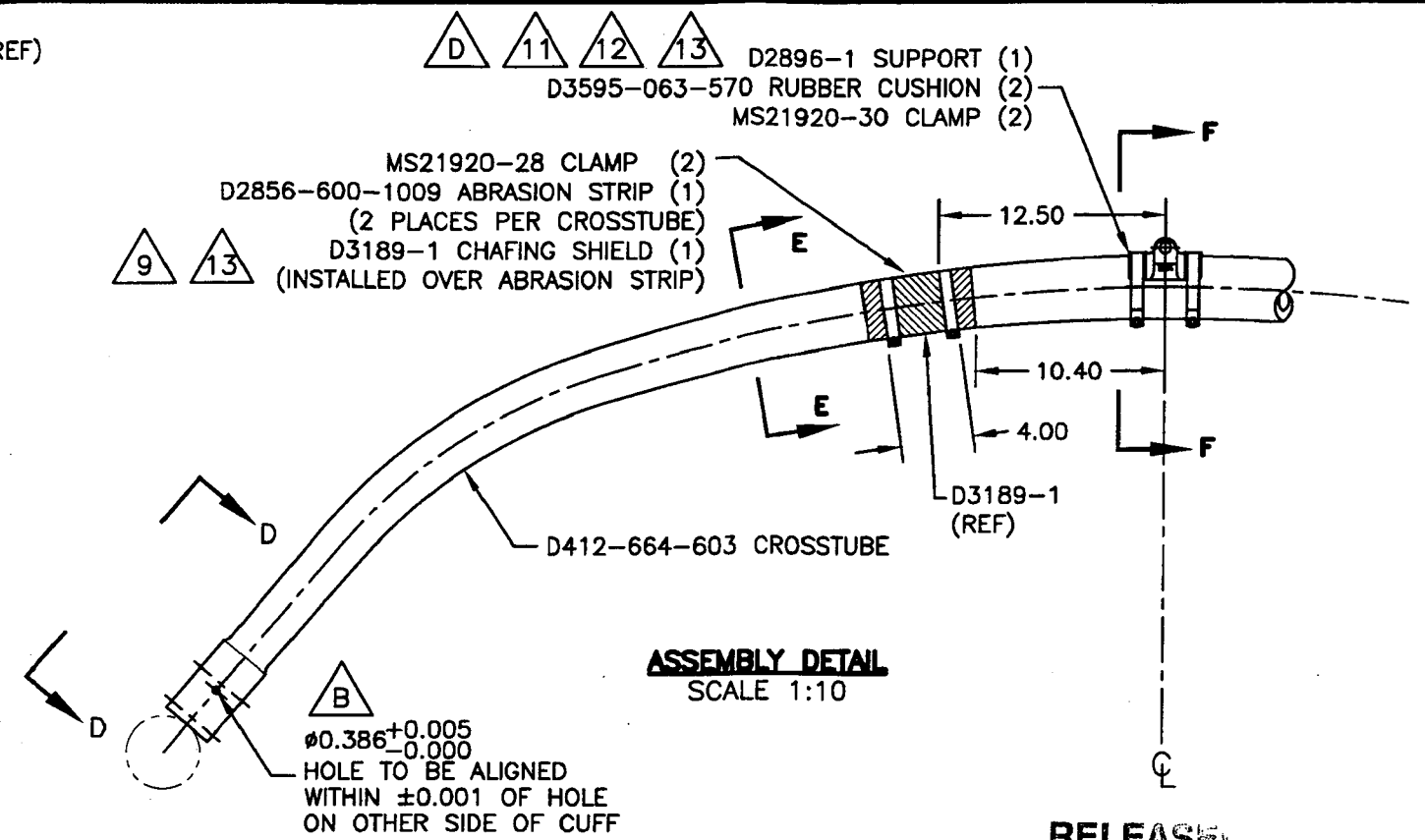
GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6009-129
FINISHED LENGTH = 124.09±0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALY, TRANSITION SHOULD BE SMOOTH.
- 6) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-600-1009 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) APPLY A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2896-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 12) INSTALL MS21920-30 CLAMPS (OR -32) WITH D3595-063-570 RUBBER CUSHIONS TO SECURE D2896-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE CROSSTUBE SUPPORT.
- 13) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. **42004**

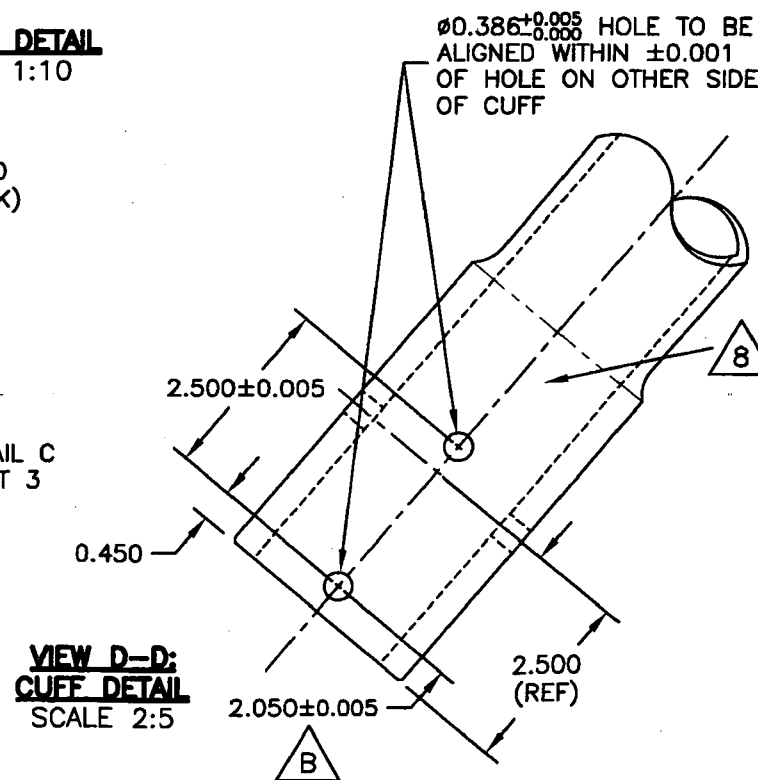
Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



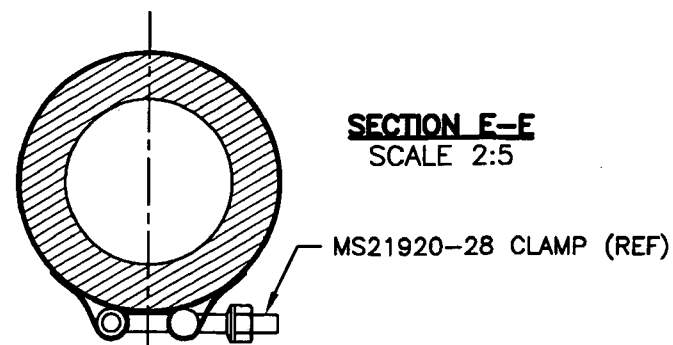
RELEASE

07.04.24



 
APPLY MAGNOBOND
BETWEEN D2896-1 AND
THE CROSSTUBE

SECTION F-F
SCALE 2:5






 MS21920-30
 CLAMP (REF)

SHOWN COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 02064

COPYRIGHT © 2001 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL
AND IS SUPPLIED ON THE EXPRESS CONDITION
THAT IT IS NOT TO BE USED FOR ANY PURPOSE
OR COPIED OR COMMUNICATED TO ANY OTHER
PERSON WITHOUT WRITTEN PERMISSION FROM
DART AEROSPACE LTD.

DESIGN

PH

DRAWN BY

DRAWN BY **A**

DART

DART AEROSPACE LTD.
HAWKESBURY, ONTARIO, CANADA

CHECKED

APPROVED

DRAWING NO.
D412-664-243

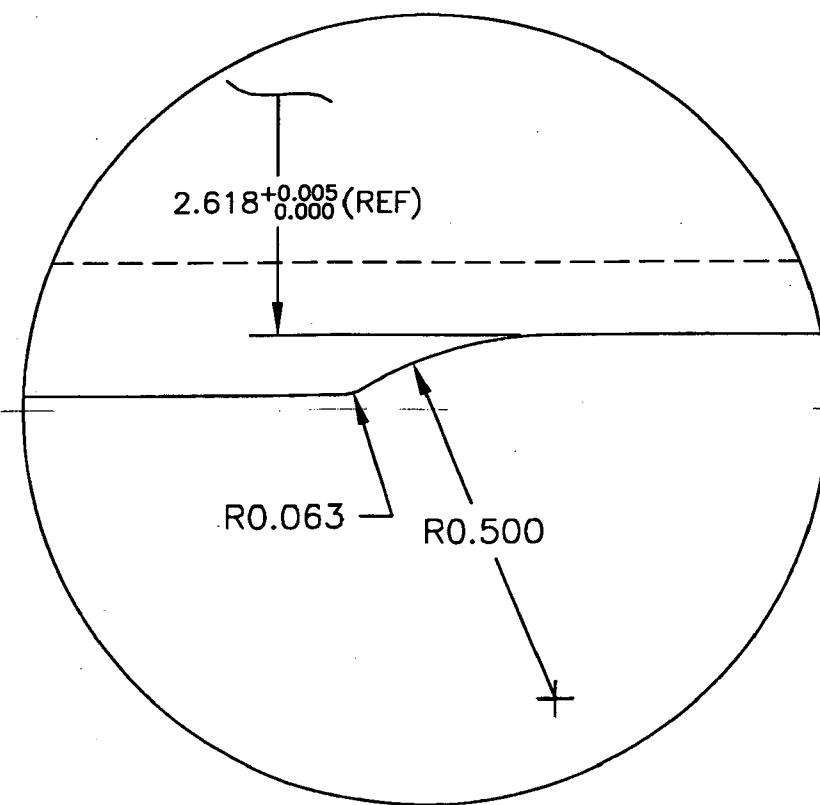
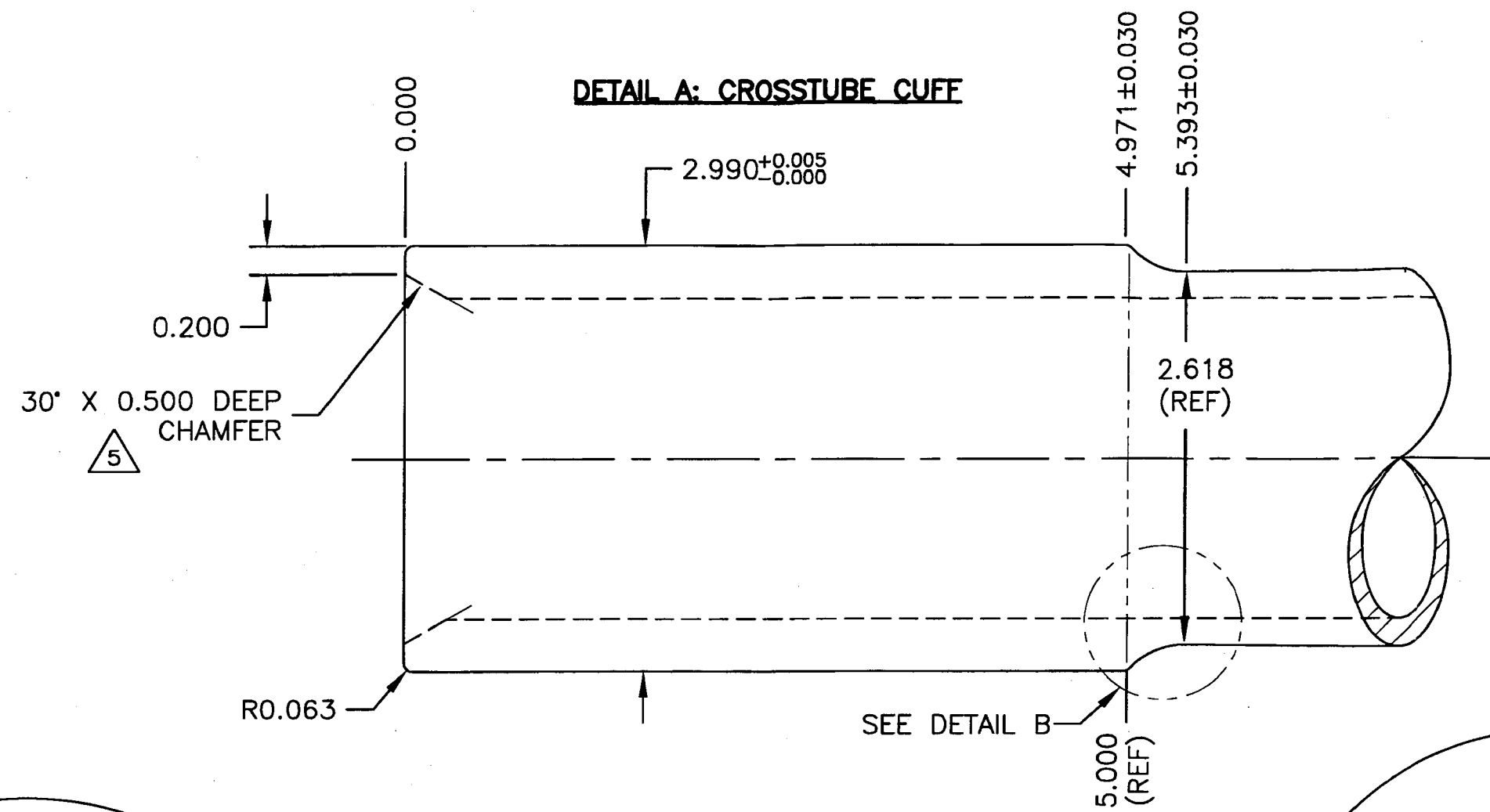
REV. D
SHEET 2 OF 3

DATE _____

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

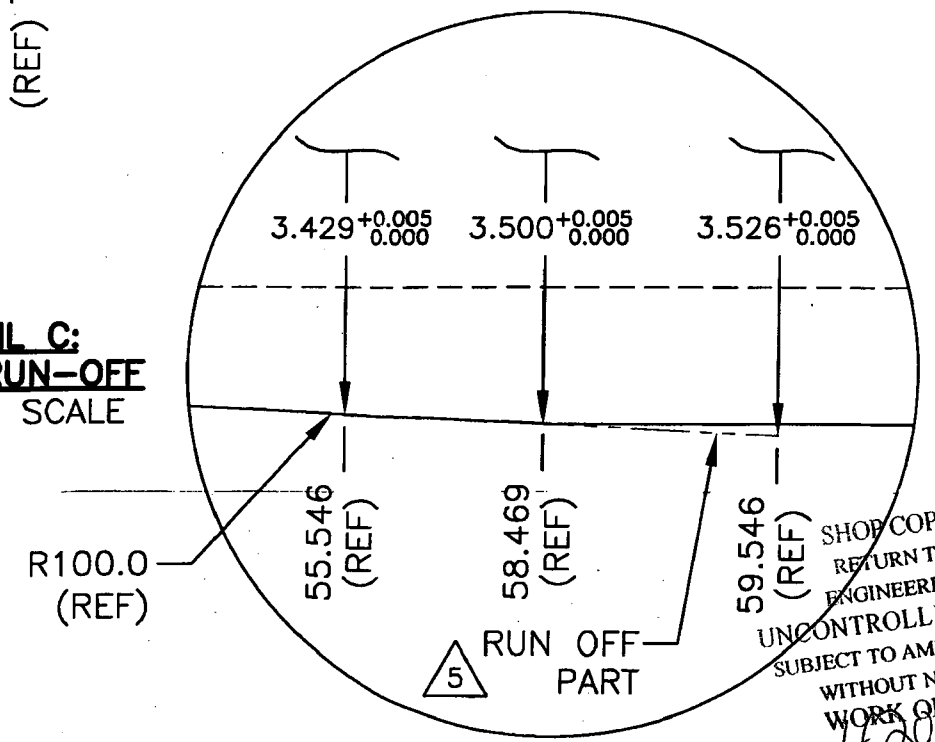
TITLE	SCALE
CROSSTUBE ASSEMBLY (412 HI AFT)	1:10

RELEASED
 07-04-244P
 PER ECN 839



**DETAIL B: CUFF
 TRANSITION**
 SCALE 4:1

**DETAIL C:
 TAPER RUN-OFF**
 NOT TO SCALE



SHOP COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 420067

COPYRIGHT © 2001 BY DART AEROSPACE LTD.		DESIGN PH	DRAWN BY PH	DART	DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		CHECKED J	APPROVED [Signature]	DRAWING NO. D412-664-243	REV. D SHEET 3 OF 3
DATE 07.03.09		TITLE CROSSTUBE ASSEMBLY (412 HI AFT)		SCALE 1:1	



ACUREN

NONDESTRUCTIVE TESTING REPORT

N- 10406

PAGE 1 OF 1

CLIENT DART AEROSPACE DATE OCT 2 2008 TIME ☒ AM ☐ PM
 ATTENTION LINDA LACELLE ACUREN JOB NO. 188-08-1533
 ADDRESS 1270 ABERDEEN ST. POWO NO. 7301
KAWKES BULK CNT. WORK LOCATION SHOP - SAME ADDRESS
 PROJECT 8 LPI. CROSS TUBES ACCEPTANCE STD. ASTM 1417/OSI-038 REV./DATE
 ITEM(S) EXAMINED SIX - CROSS TUBES.
JOB # PART - 41393, 41394, 42063, 42064, 42282, 42283.

JOB DESCRIPTION

PART NO. MATERIAL ALUMINUM THICKNESS
 SCOPE WET FLOUORESCENT LIQUID PENETRANT INSPECTION CARRIED OUT ON 100% EXTERNAL SURFACE - * NOTE: INDICATIONS, PL ON CHATTEL/D4.590" UP FROM THE END OF THE CUFF. 2" RADIUS ON BOTH ENDS/41394.

LIQUID PENETRANT TESTING PROCEDURE NO. LT-XXXX REV./DATE TECHNIQUE NO. LT-XXXX-XXX REV./DATE
 METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED
 FAMILY BRAND MAGNAFLUX BLACK LIGHT S/N 8371 ☐ OUTPUT > 1000 μ W/cm² ☐ AMBIENT < 2 fc
 PENETRANT 2L 67 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE
 PENETRANT REMOVER H2O MINIMUM DRY TIME > 10 MIN. OTHER CAL FEB 12-08
 DEVELOPER MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N CAL DUE DATE
 DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY
 SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☐ MACHINED ☐ SHOT BLASTED ☒ CLEAN BARE METAL
 SURFACE ☐ < - 4°C/ 20°F ☐ - 4°C/ 20°F TO 10°C/50°F ☐ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F
 TEMPERATURE

MAGNETIC PARTICLE TESTING PROCEDURE NO. MT-XXXX REV./DATE TECHNIQUE NO. MT-XXXX-XXX REV./DATE
 METHOD ☐ DRY ☐ WET ☐ FLUORESCENT ☐ NON FLUORESCENT ☐ YOKE ☐ COIL ☐ HEAD ☐ CONDUCTOR BAR
 PARTICLE BRAND PRODUCT No. CURRENT ☐ AC ☐ DC EFF. CURRENT AMPS:
 PARTICLE COLOUR ☐ GREY ☐ RED ☐ BLACK ☐ OTHER MT INSTRUMENT S/N CAL DUE
 SUSPENSION ☐ WATER ☐ OIL ☐ NOT APPLICABLE BLACK LIGHT S/N ☐ OUTPUT > 1000 μ W/cm² ☐ AMBIENT < 2 fc
 CONTRAST PAINT PRODUCT No. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100fc @ SURFACE
 MAG. TIME SECONDS DEMAG. REQUIRED? ☐ Yes ☐ No LIGHT METER S/N CAL DUE
 SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☐ MACHINED ☐ SHOT BLASTED ☐ CLEAN BARE METAL ☐ COATED
 THE TECHNIQUE HAS BEEN DEMONSTRATED OVER A COATED SURFACE? ☐ YES ☐ N/A THICKNESS: TYPE OF COATING:
 SURFACE TEMPERATURE ☐ < 57°C/135°F ☐ 57°C/135°F TO 316°C/600°F ☐ > 316°C/600°F

ULTRASONIC TESTING PROCEDURE NO. UT-XXXX REV./DATE TECHNIQUE NO. UT-XXXX-XXX REV./DATE
 METHOD ☐ THICKNESS ☐ FLAW DETECTION ☐ CONTACT ☐ IMMERSION
 INSTRUMENT MODEL S/N CAL. DUE DATE
 CAL. BLOCK S/N CABLE - TYPE Coaxial - _____ to _____ LENGTH
 CAL. BLOCK S/N COUPLANT
 CAL. BLOCK S/N SPECIAL EQUIP.

INFORMATION - TRANSDUCERS & CALIBRATIONS -

TEST ANGLE	PROBE TYPE		MAKE	FREQ.	SER. NO.	PROBE DIA.	TRANSFER VALUE	TEST FROM FACE	REFERENCE REFLECTOR	REFERENCE		SCAN SENSITIVITY	RANGE
	SINGLE	DUAL								dB	% FSH		
1	<input checked="" type="checkbox"/> 0°	<input type="checkbox"/>											
2	<input type="checkbox"/>	<input type="checkbox"/>											
3	<input type="checkbox"/>	<input type="checkbox"/>											

TEST SURFACE

SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☐ MACHINED ☐ SHOT BLASTED ☐ CLEAN BARE METAL
 SURFACE TEMPERATURE ☐ < 0°C/32°F ☐ 0°C/32°F TO 120°C/250°F ☐ 120°C/250°F TO 260°C/500°F ☐ > 260°C/500°F

Scope of Services
 The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacturing, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.
 Standard of Care
 In performing the services provided, Acuren Group Inc. uses the degree of care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

WHITE - CLIENT COPY CANARY - OFFICE COPY PINK - TECHNICIAN COPY GOLD - OFFICE COPY